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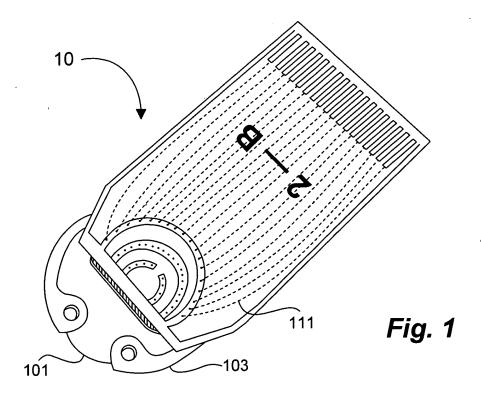
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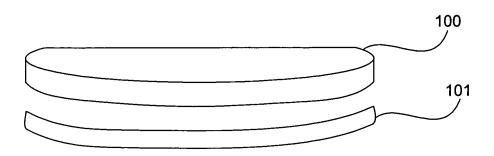
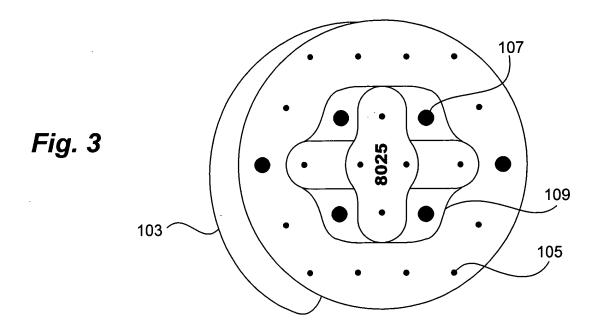
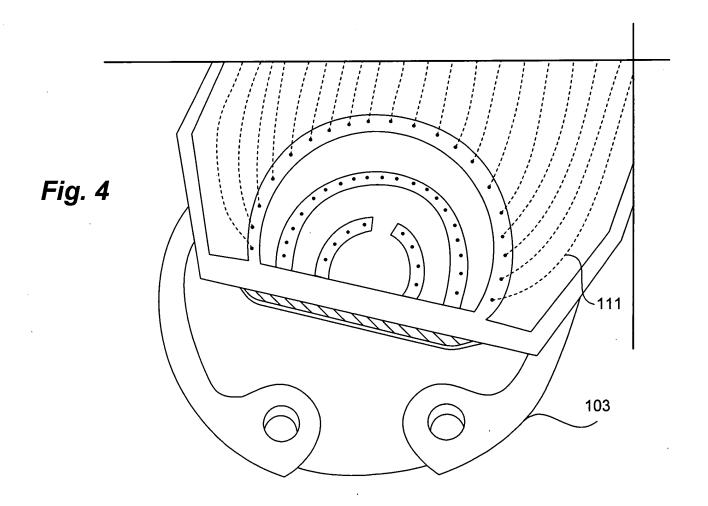
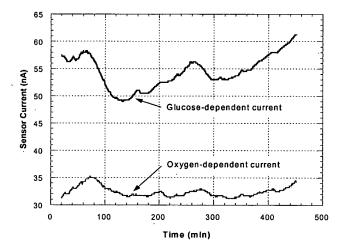


Fig. 2







#### FIGURE 6

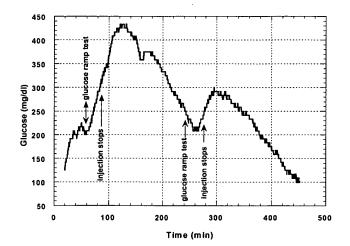


FIGURE 7

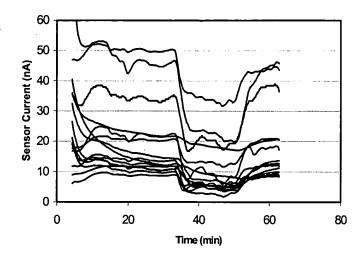


Figure 8 Algorithm for Modifying (or Generating) Signal Adjustment Factors Using Extrinsic Measurements

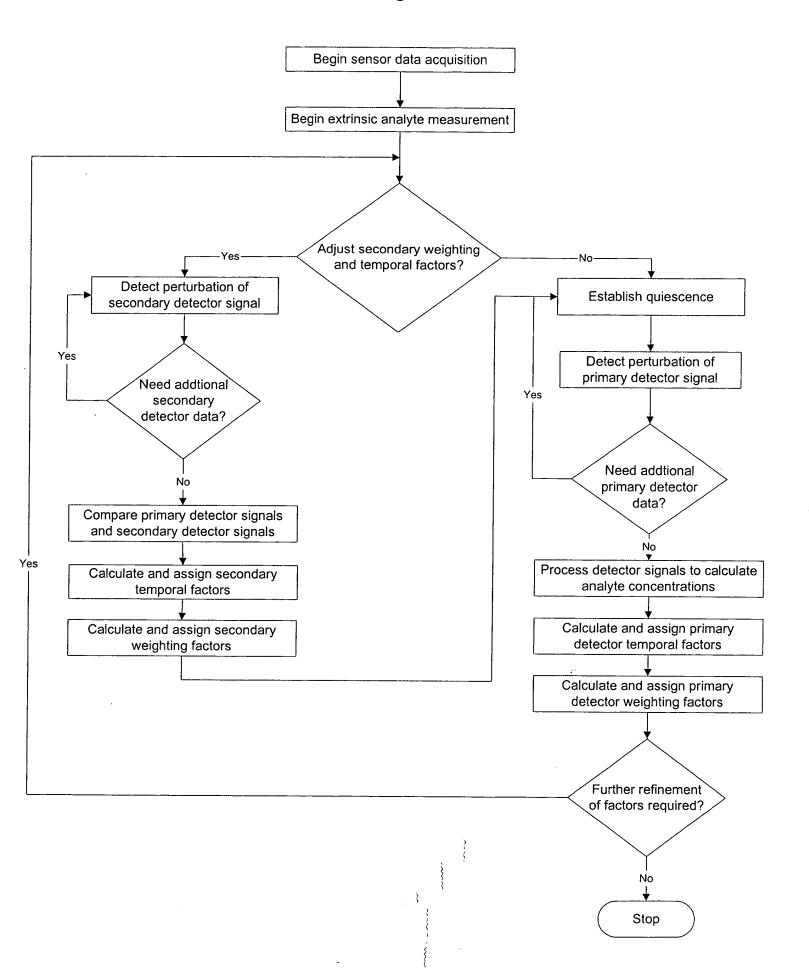
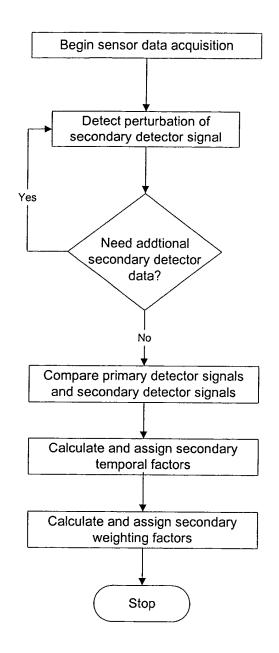


Figure 9 Algorithm for Modifiying Secondary Weighting and Temporal Factors without Extrinsic Measurements



## Figure 10 Algorithm for Checking Detector Signal Integrity and Calculating Analyte Concentration

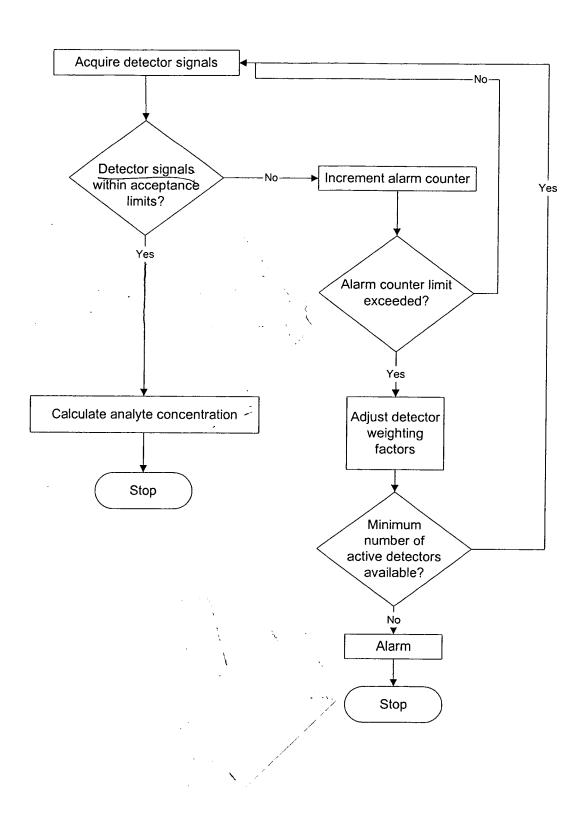
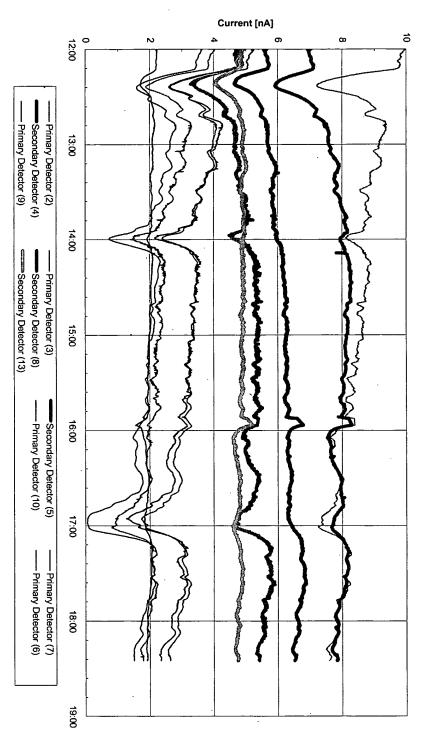


Figure 11: Raw Currents from All Detectors



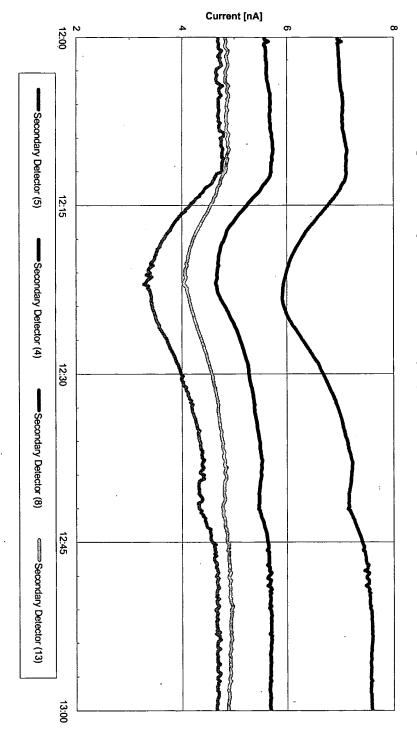


Figure 12: Enlarged View of Secondary Signal Temporal Adjustment Region

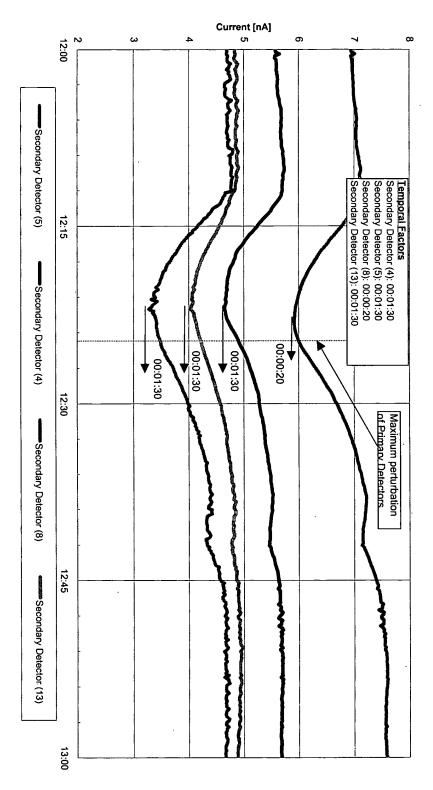


Figure 13: Secondary Signal Temporal Adjustment

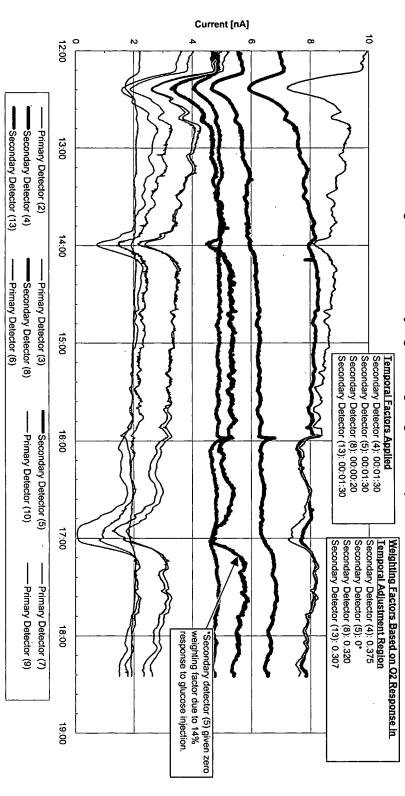


Figure 14: Secondary Signal Weighting Factor Adjustments

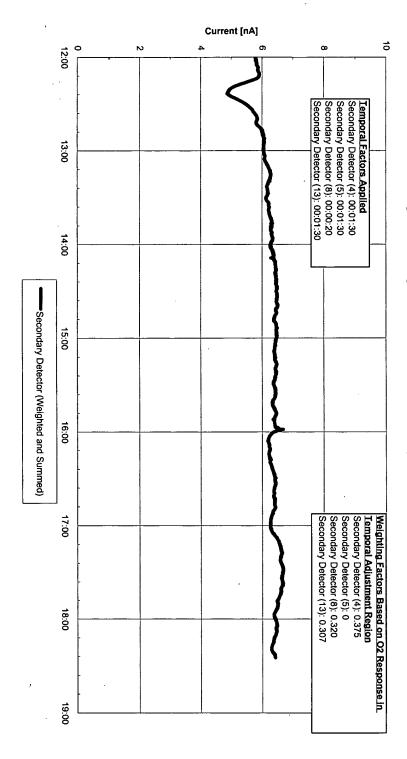


Figure 15: Weighted and Summed Secondary Detector Signal

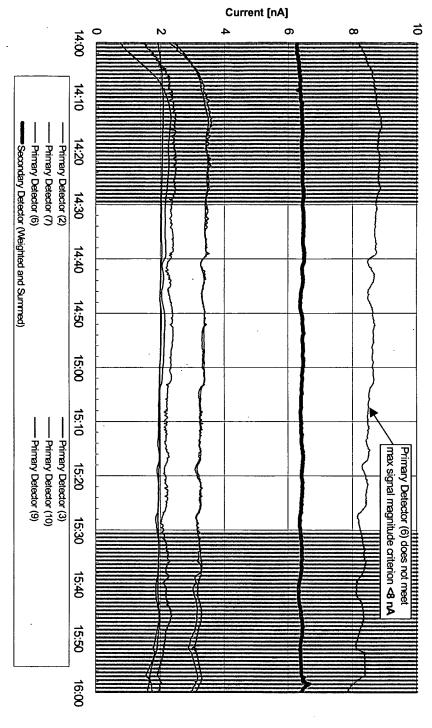


Figure 16: Establish Quiescence

Figure 17: Temporally Adjusted, Weighted and Summed Secondary Signal Converted to PO2 and Raw Primary Signals PO2 signal acquired by taking the weighted current and multiplying by the pre-calibrated scaling factor.

20

Current [nA] ∾ ω

16:00

16:30

17:00

17:30 —— Primary Detector (3)

18:00

18:30 15

6

17

ಹೆ ಹೆ PO2 [mmHg]

— Primary Detector (10)

Secondary Detector (Weighted and Summed)

— Primary Detector (2)
— Primary Detector (7)
— Primary Detector (9)

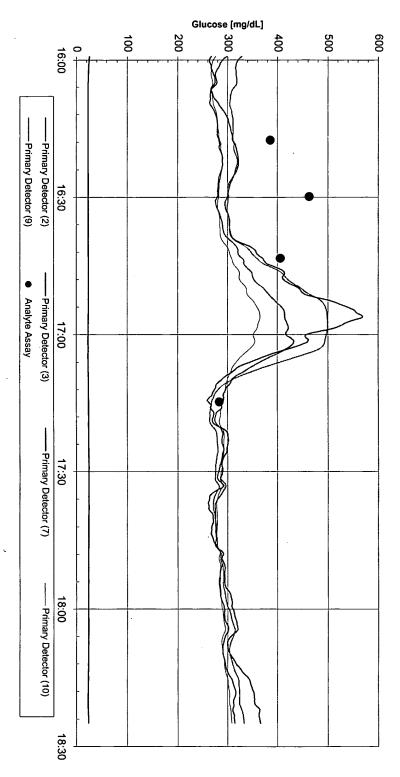


Figure 18: Calculated Analyte Concentrations

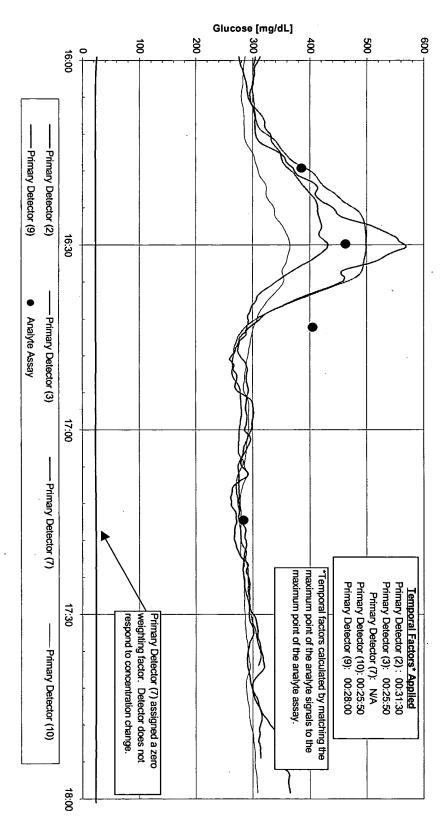


Figure 19: Temporally Adjusted, Calculated Analyte Concentrations

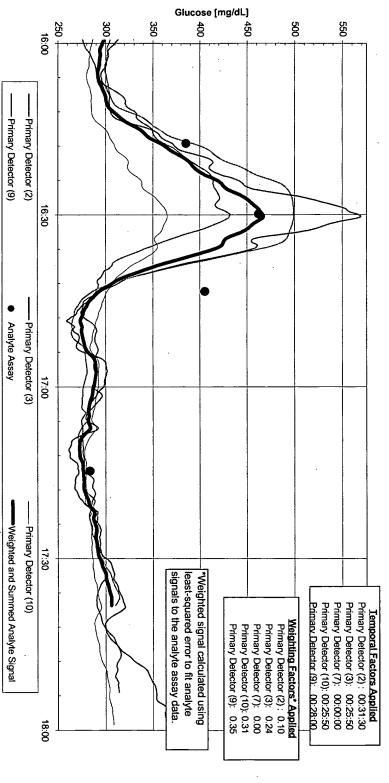


Figure 20: Temporally Adjusted, and Weighted and Summed Analyte Signals